

REMARKS

Claims 1-7, 10-13 and 15-17 have been rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,107,378 ('378 Patent) in view of U.S. Patent No. 6,512,174 ('174 Patent) and 5,872,169 ('169 Patent); and claims 8, 9 and 15-17 have been rejected under 35 U.S.C. § 103(a) under the '378 Patent in view of the '174 Patent and U.S. Patent Application Publication No. 2001/0018487. Claim 4 was previously canceled and therefore, the rejection of this claim is rendered moot. That aside, the rejections are respectfully traversed.

The present invention, according to independent claim 1, is directed to:

A composition comprising:
one or a plurality of species of an
organic polymer compound having
biodegradability, a flame retardant
additive, and a hydrolysis inhibitor for the
organic polymer compound having
biodegradability

wherein the flame retardant additive is
at least one compound selected from a
hydroxide compound, a phosphorus compound,
and a silica compound.

As explained on page 4 and 5 of the specification, Applicant has found that such a composition, with its specific combination of one or more biodegradable polymers, a specific flame retardant additive, and a hydrolysis inhibitor, results in a composition with the advantages of not only being biodegradable and flame retarding, but also of sufficient mechanical strength.

In the Official Action, the Patent Office acknowledges that the '378 Patent differs from the present invention. Specifically, as stated on page 2 of the Official Action, "[t]he difference between that patent and the instant claims is the addition of a flame retardant such as high purity magnesium

hydroxide having a BET surface area less than m²/g."

Nonetheless, the Patent Office concludes:

"The '174 patent teaches that flame retardants including magnesium hydroxide can be added to similar resins. (See column 5, line 29). It would have been obvious to one of ordinary skill in the art to add a magnesium hydroxide flame retardant to the composition of the '378 patent for that reason. The '169 patent teaches a process for making substantially pure magnesium hydroxide that performs exceptionally well as a flame retardant for resin having a BET surface area of 0.9-3.5 m²/g. See examples 1-14 and column 1, lines 9-11. It would have been obvious to one of ordinary skill in the art to select a magnesium hydroxide like that of the '169 patent because it teaches they perform particularly well."

Applicant submits that the Patent Office has not shown the requisite motivation, suggestion or teaching to render the present invention obvious. Thus, the Patent Office has not established a *prima facie* case of obviousness.

In this regard, reference is made to *In Re Fritch*, 23 USPQ 2d 1780 (CAFC 1992), in which the Court states at page 1783:

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so'. Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious 'modification' of the prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification....It is impermissible to use the claimed invention

as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention". (Underlining added for emphasis.)

There does not appear to be any suggestion in any of the recited prior art, whether alone or combined, as required by the Court in *In Re Fritch*, to modify the composition of the '378 patent in the manner suggested by the Examiner.

Although the '387 teaches compositions of biodegradable polymers and hydrolysis inhibitors, it does not disclose, teach or suggest the addition of flame retardants to its composition. Additionally, the '378 Patent supplies no motivation to modify its composition to add any flame retardants, let alone the particular flame retardants of the present invention, as specified in independent claim 1. First, there is no mention of flame retardancy or any flame retardant compounds at all in the '378 Patent. Additionally, for all the uses disclosed (e.g., films, pots for plant cultivation and vegetation nets) for its composition, flame retardancy is not disclosed as and does not appear to be a necessary or desirable feature.

As for the '174 Patent, it is directed to a housing made of a biodegradable material (e.g., polylactic acid) that could include a flame retardant (e.g., magnesium hydroxide). However, there is no mention of hydrolysis inhibitors at all in the '174 Patent.

Meanwhile, the '169 Patent is directed to magnesium hydroxides of a specified BET surface area, and U.S. Patent Application Publication No. 2001/0018487 discloses resins that could include inorganic fillers, such as silica. Neither of

these references, however, make any mention of biodegradable polymers or hydrolysis inhibitors.

Therefore, Applicant does not see where the requisite motivation, suggestion or teaching to combine the cited references to arrive at the present invention lies in any of the cited prior art. Accordingly, in the Amendment dated March 21, 2006, the Patent Office was asked to identify such motivation, suggestion or teaching. In response, the Patent Office stated:

"Applicant's response argues that the examiner has not pointed out where the motivation can be found to modify the '378 patents with the flame retardants of the secondary references. The first office action clearly indicates that the motivation to modify the '378 patent disclosure lies in the prior art teaching that additional materials such as magnesium oxide, talc and silica act as flame retardants. Every comparative example of the instant specification serves only to conform this observation that addition of a flame retardant to a polymeric composition retards flame."

First, even assuming arguendo that the prior art teaches that magnesium oxide, talc and silica act as flame retardants, this does not provide any motivation or teaching to add flame retardants to the composition of the '378 Patent. A teaching that certain compounds are known flame retardants is separate and not related to a teaching that flame retardants, or even those compounds, may be added to certain compositions, especially in this situation, in which the '378 Patent makes no mention of magnesium oxide, talc or silica, or any flame retardants.

Here, the Patent Office is basically asserting that the '174 Patent teaches that flame retardants can be added to "similar resins" as the resins or polymers in the compositions of the present invention. Even if true, however, this still

does not result in a *prima facie* case of obviousness. Just because an element or ingredient could be added to a composition, absent a teaching or suggestion, one still would not be motivated to add that element or ingredient. And, as explained above, there is still no teaching or suggestion in the cited prior art to modify the composition in the '378 Patent to include flame retardants. Additionally, even if the addition of flame retardants to biodegradable resins and polymers is known, there is still no teaching or suggestion to add flame retardants to a composition including both biodegradable polymers and hydrolysis inhibitors to arrive at the present composition.

Also, although the '174 Patent discloses magnesium hydroxide as a known flame retardant, the '174 Patent discloses other flame retardant compounds as well. However, as the shown in claim 1, and explained on page 4 of the specification, the present composition includes only certain flame retardant compounds (for the reasons set forth on page 4). Some flame retardants, such as halogen flame retardants, are not preferred or included in the present composition. However, neither the '174 Patent, nor any of the other cited references, provide any motivation or teaching to select a flame retardant of the present composition (*i.e.*, a hydroxide compound, a phosphorous compound or a silica compound over the other listed or disclosed flame retardants).

As shown above, a *prima facie* case of obviousness has not been established. Instead, the Patent Office is picking and choosing from various references to arrive at the present invention. In addition, the Patent Office has offered scant and insufficient support for any motivation to combine the cited references. In this regard, absent a teaching, suggestion or motivation to combine the cited references, the Patent Office is left with only Applicant's own specification to teach, suggest and provide motivation for the present invention. Indeed, the

Patent Office even referred to the comparative examples of the present specification for support of such motivation. This amounts to an impermissible hindsight reconstruction of the invention.

Thus, withdrawal of the § 103(a) rejection of claims 1-7, 10-13 and 15-17 is respectfully requested.

Claims 8, 9 and 15-17 depend from independent claim 1, 1 and, as such, include all of the features set forth therein. The Examiner appears to only rely on U.S. Patent Application Publication No. 2001/0018487 for the features of claims 8, 9 and 15-17 and not to overcome the above-described deficiencies of the '378, '174 and '169 patents. Accordingly, it is also respectfully requested that the § 103(a) rejection of claims 8, 9 and 15-17 be withdrawn.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

Application No.: 10/508,403

Docket No.: SONYJP 3.3-1005

If there are any additional charges in connection with this response, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

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